



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/420,796	10/19/1999	SCOTT KIRKPATRICK	YO999-421	3306

7590 03/03/2003

MCGINN AND GIBB PC
SUITE 100
1701 CLARENDON BOULEVARD
ARLINGTON, VA 22209

EXAMINER

DELA TORRE, CRESCELLE N

ART UNIT	PAPER NUMBER
----------	--------------

2174

DATE MAILED: 03/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/420,796

Applicant(s)

KIRKPATRICK ET AL.

Examiner

Crescelle dela Torre

Art Unit

2174

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9,11-14 and 16-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9,11-14 and 16-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to communications: Amendment, filed on 12/19/02.

This action is final.

Claims 1-9, 11-14, and 16-25 are pending in this application. Claims 1, 16, 20, 23, and 24 are independent claims. In the Amendment, filed on 12/19/02, claims 1-7, 9, 13, and 16-25 were amended, and claims 10 and 15 were canceled.

The present title of the invention is "Apparatus and Method for Using a Target Based Computer Vision System for User Interaction" as originally filed.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-9, 11-14, and 16-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazama et al (U.S. patent 6,111,580) in view of Iwamura (U.S. patent 6,498,628).

As to claim 1, Kazama et al, hereinafter Kazama, teaches the following subject matter:

capturing a first image within a window, with hand area 81, at figure 13;

displaying a user image within the window, at figure 13;
receiving a first indication from the user that the user image is to be associated with a first computer event, at column 8, lines 51-62;
associating a first computer event in response to the first indication, at column 8, lines 51-62, and column 9, lines 21-41; and
storing information in a memory device regarding the association, at column 13, lines 40-45.

Kazama teaches the above elements of claim 1. Kazama also teaches a hand area image 81, at figures 13, 14, and column 9, lines 24-41, in which the first user action is displayed. However, Kazama does not specifically teach that the hand area image 81 is a target area.

On the other hand, Iwamura teaches a motion sensing interface which includes a "motion detector circuit" that "detects either the image of the user's hand or a predetermined motion of the user's moving hand within the field of view as an indication that a remote control operation is to be started" at column 1, lines 42-47. In addition, Iwamura teaches a target area, with detected active region 100, at figure 4, and column 5, line 52 to column 6, line 3, in which the CPU can "distinguish the hand motion from the others because the associated active region moves in the same way as the predetermined hand motion". Furthermore, Iwamura associating the computer event with the state of the target area, at column 5, lines 57-67, which describes that "if the active region meets these conditions, the CPU 16 judges it is the hand image".

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the target area, or detected active region, of Iwamura in the invention of Kazama because it allows a user to input an operation without use of any operating section for inputting data other than position data.

As per claim 2, Iwamura teaches:

capturing a second image with the first target area, at figure 16;

displaying the second image, at figure 16, wherein the first indication indicates a change of state between the first and second images, and associating the change of state with a first computer event, at column 6, lines 26-34.

Kazama teaches detecting a change of a pattern of color [claim 3] at figure 3B, and column 5, lines 31-38; and storing a summary of colors [claim 4] at column 5, lines 39-65.

Iwamura teaches that a change of state is a change of position of the user image within the first target area [claim 5] at figures 6-8, and column 6, lines 4-16; and that the first image includes an object [claim 6] with buttons 22, at figure 9.

Regarding claim 7, Kazama teaches a specific computer function to execute, at column 8, lines 51-62, column 9, lines 21-41, and column 13, lines 43-45.

As to claim 8, Iwamura shows a rectangular target area, at figure 4.

Kazama teaches that the first computer event comprises plural computer events [claim 9] at column 5, lines 46-59.

Iwamura teaches positioning [claim 11] and locating [claim 12] the target area, at column 5, line 52 to column 6, line 3.

As per claim 13, Iwamura teaches:

receiving a second indication that a state of the second target area including a user image is to be associated with a second computer event; at column 6, lines 26-34; and associating the second computer event with a state of the second user action, at column 6, lines 26-34, and storing information regarding the association, 4, lines 49-60.

Kazama describes a mouse click action [claim 14] at figure 7, and column 7, line 2.

As per claim 16, Kazama teaches the following subject matter:

enabling a computer system to associate a user image with a first computer event, at figures 13, 14, and column 9, lines 21-41;

capturing the user image within the image capture system, with TV camera 431, at figure 12, and column 9, line 18; and

performing the first computer event when the specific user action is captured, at figure 14, column 8, lines 51-62, and column 9, lines 31-41.

Kazama teaches the above elements of claim 16. Kazama also teaches a hand area image 81, at figures 13, 14, and column 9, lines 24-41, in which the first user action is displayed. However, Kazama does not specifically teach that the hand area image 81 is a target area.

On the other hand, Iwamura teaches a motion sensing interface which includes a "motion detector circuit" that "detects either the image of the user's hand or a predetermined motion of the user's moving hand within the field of view as an indication

that a remote control operation is to be started” at column 1, lines 42-47. In addition, Iwamura teaches a target area, with detected active region 100, at figure 4, and column 5, line 52 to column 6, line 3, in which the CPU can “distinguish the hand motion from the others because the associated active region moves in the same way as the predetermined hand motion”. Furthermore, Iwamura associating the computer event with the state of the target area, at column 5, lines 57-67, which describes that “if the active region meets these conditions, the CPU 16 judges it is the hand image”.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the target area, or detected active region, of Iwamura in the invention of Kazama because it allows a user to input an operation without use of any operating section for inputting data other than position data.

Claims 17-19 and 21-23 are respectively similar to claims 1, 11, 13, 1, 13, 1.

As to claim 20, Kazama teaches the following:

an image capture system that captures a user image, with TV camera 431, at figure 12, and column 9, line 18;

an image display system that displays the captured first image, at figures 13, 14;
and

a computer system that recognizes the user image and associates the image with a first computer command, at figure 12, and column 9, lines 16-41.

Kazama teaches the above elements of claim 20. Kazama also teaches a hand area image 81, at figures 13, 14, and column 9, lines 24-41, in which the first user

Art Unit: 2174

action is displayed. However, Kazama does not specifically teach that the hand area image 81 is a target area.

On the other hand, Iwamura teaches a motion sensing interface which includes a "motion detector circuit" that "detects either the image of the user's hand or a predetermined motion of the user's moving hand within the field of view as an indication that a remote control operation is to be started" at column 1, lines 42-47. In addition, Iwamura teaches a target area, with detected active region 100, at figure 4, and column 5, line 52 to column 6, line 3, in which the CPU can "distinguish the hand motion from the others because the associated active region moves in the same way as the predetermined hand motion". Furthermore, Iwamura associating the computer event with the state of the target area, at column 5, lines 57-67, which describes that "if the active region meets these conditions, the CPU 16 judges it is the hand image".

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the target area, or detected active region, of Iwamura in the invention of Kazama because it allows a user to input an operation without use of any operating section for inputting data other than position data.

Regarding claim 24, Kazama teaches a method for enabling a computer system to recognize specific user actions, the method comprising:

associating a first computer event with a user image, at column 8, lines 51-62, and column 9, lines 21-41; and

storing information in a memory device regarding the association, at column 13, lines 40-45.

Kazama teaches the above elements of claim 24. Kazama also teaches a hand area image 81, at figures 13, 14, and column 9, lines 24-41, in which the first user action is displayed. However, Kazama does not specifically teach that the hand area image 81 is a target area.

On the other hand, Iwamura teaches a motion sensing interface which includes a "motion detector circuit" that "detects either the image of the user's hand or a predetermined motion of the user's moving hand within the field of view as an indication that a remote control operation is to be started" at column 1, lines 42-47. In addition, Iwamura teaches a target area, with detected active region 100, at figure 4, and column 5, line 52 to column 6, line 3, in which the CPU can "distinguish the hand motion from the others because the associated active region moves in the same way as the predetermined hand motion". Furthermore, Iwamura associating the computer event with the state of the target area, at column 5, lines 57-67, which describes that "if the active region meets these conditions, the CPU 16 judges it is the hand image".

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the target area, or detected active region, of Iwamura in the invention of Kazama because it allows a user to input an operation without use of any operating section for inputting data other than position data.

As to claim 25, Kazama teaches capturing the user image, at figure 13.

Response to Arguments

3. Applicant's arguments with respect to claims 1-9, 11-14, and 16-25 have been considered but are moot in view of the new ground(s) of rejection.

Examiner agrees that the Kazama reference, when taken alone, or in combination with Numazaki, does not disclose the claim limitations. Rather, the claims have been rejected in view of Kazama and Iwamura. Iwamura makes up for the missing elements in Kazama by teaching a target area, with detected active region 100, at figure 4, and column 5, lines 59, including a user image 25, at figure 13, and column 6, line 63 to column 7, line 2, and associating a computer event with the state of the target area which includes the user image, at column 5, line 57 to column 6, line 5, which describes that "if the active region meets these conditions, the CPU 16 judges it is the hand image" and "once the hand position is located, CPU 16 sends a command to OSD 5 and OSD 5 generates menu buttons".

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Maruno et al (U.S. patent 6,191,773) teach an interface apparatus for controlling displayed information using hand gestures.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

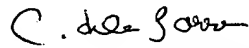
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crescelle dela Torre whose telephone number is (703) 305-9782. The examiner can normally be reached on Monday-Thursd, from 8am-4pm, and alternate Fridays, from 8am-3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (703) 308-0640. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for official communications; (703) 746-7238 for After Final communications; and (703) 746-7240 for non-official or draft communications.

Art Unit: 2174

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


CRESCELLE N. DELA TORRE
PRIMARY EXAMINER